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1922
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 6 1922

REPORT FOR WEEK ENDING MAY 6, 1922.

AKRON:

The past week has been very favorable for all vegetative growth. Spring sown grains are showing up nicely on all the rotation plats as well as on the Cereal Project. Alfalfa has started into vigorous growth. Winter wheat on the rotation plats will be practically a failure. Cereal Project winter wheat offers much greater encouragement. Fully half the trees in the orchard are in bloom. Cherries are not yet in bloom but the buds are swollen so that a freeze undoubtedly would injure them. Plums are all in bloom and each tree is profusely covered. About half of the apple varieties are in bloom. All the pear varieties are in bloom. First trees to bloom were the apricots, fully a week ago, showing bloom at a distance. Average date of frost at this station is May 18. It appears that frost damage to the fruit is more than probable.

Replants were filled in the orchard Saturday. The soil handled was slightly sticky after the rain of a week before. Other work has been largely devoted to making ready for increased tree and shrubbery plantings at this station, the rain offering an excellent opportunity for working up the sod for the trees and shrubs.

Maximum temperature 77, minimum 37; precipitation .22 inch.

ARCHER:

Weather conditions during the past week, except Monday, have been cery propitious for field operations. The precipitation of the preceding week moistened the soil to such an extent that plowing is progressing at the greatest possible speed. The very large clods on the fall-plowed and spring-plowed corn plats crumbled considerably during the rains and snow. The lateness of adequate precipitation has caused a delay in the date of seeding.

The grass on the prairies is making rapid growth and all feeding of range stock has been discontinued.

Maximum temperature 73, minimum 32; precipitation .09 inch.

ARDMORE:

Climatic conditions during the week have been favorable for the prosecution of farming operations. There has been no precipitation of any consequence and the heavy rains of about two weeks ago left the soil in excellent condition for tillage.

All small grain crops and native grasses are making a very rapid growth. Native grasses probably will furnish sufficient feed to be available for pasture by the middle of the month.

Considerable time was spent during the week in thinning out and removing dead trees ffom the shelterbelt west of the station buildings. This shelterbelt was planted in 1917. In accordance with the original plans it contained on the south end nine rows of deciduous trees spaced four feet by eight feet, and on the north end eighteen rows of the same kind of trees spaced four feet by four feet. The varieties used and the arrangement of rows from east to west were as follows:

1 - Caragana
2 - Poplar
3 - American elm
4 - Poplar
5 - Poplar
6 - Box elder
7 - Ash
8 - Box elder
9 - Laurel-leaf willow

Ardmore, continued:

All these trees made an excellent growth during the five years - 1917 to 1921 inclusive. By the end of last season the poplars had attained a height of from 15 to 20 feet. Practically all of this variety was dead this spring.

Sufficient observations have been made to warrant the conclusion that a four-by-four foot spacing is entirely too thick and even an eight foot spacing is too thick for a permanent shelterbelt. Thick spacing is ideal for furnishing protection quickly, but there is not sufficient space to allow the trees to attain any considerable size. The shelterbelt on the station has been thinned out so that the trees are 12 to 16 feet apart.

Maximum temperature 75, minimum 3"; precipitation .02 inch.

BIG SPRINGS:

The weather during the last half of this week has cleared up in nice shape, after the unusual rainy spell which prevailed here for several days. Precipitation to the amount of 10.91 inches fell during the twelve days previous to May 3. A total of 12.77 inches was recorded for the month of April, which was the highest monthly rainfall recorded here since July 1903, when 12.89 inches fell.

Today is the first time that we have been able to do any field work for the past two weeks, so we were unable to get the April 30 date of planting done on time. There was considerable cotton planted throughout the county before the rain and in nearly every case it will have to be replanted.

The winter wheat plats are being disced today, and will be seeded to millet the first of the week. Other work of the week has consisted of repairing and resetting the flag pole, which was broken off by the high winds and in cleaning up around the yard and buildings.

Maximum temperature 93, minimum 40; precipitation 1.84 inches.

COLBY:

The week just closing has been the best growing week that we have had all season. Winter wheat continues to look good and has almost doubled its growth in the past ten days. Most of the fields and plats cover the ground nicely and stands from four to ten inches in height. Soil moisture in all the plats sampled show that the rains of the previous ten days have soaked into the second foot of soil and some into the third foot. This moisture is reviving some of the wheat that looked as if it would be too thin for much of a crop. There is going to be considerable thin wheat in the county this year, however, due to the prolonged winter drought.

The spring grains, barley, oats, and spring wheat are looking fine; they are about four inches high and have good color and stand. One plat of rye for green manure is rather thin at one end of the plat, this is the plat where rye follows milo. Wheat following milo shows the same thin stand. Peas for green manure are up about four inches and look good.

The spring-plowed corn plats were plowed and harrowed during the week. It is the intention to plant them during the coming week.

Pear and plum trees are in full bloom today. Peach trees are just beginning to bloom.

All roads were worked on the project during the week. Also the remaining bindweed patches were plowed out.

Native pastures are just beginning to furnish pasture for stock. There is evidently going to be more corn planted this year than last, hardly a day goes by that we do not have inquiries for seed corn. Our supply has long since been exhausted.

DALHART:

Climatic conditions have been very favorable during the entire week. One small shower occurred Tuesday evening just at dusk, netting .02 inch. The week as a whole has been quite warm during the day. The wind movement was below normal.

The fields were too wet to work Monday, so the thinning of the osage orange planting was completed. The harrow was started Tuesday morning on the Cereal block, all plats being harrowed that were plowed before the rain. The disc was also started Tuesday and has been run continuously all week. The plowing of the remainder of the Cereal block will be finished this afternoon. On Wednesday the plats to be planted to the first date were prepared for planting and the planting made in the late afternoon. Six varieties are used in the date test at this station. Some Sudan and red amber was planted today for early feed. The two were mixed and seeded with the drill on the strip of land occupied by the blue weed.

Maximum temperature 86, minimum 36; precipitation .02 inch.

GARDEN CITY:

The past fall and winter were very dry, but moisture conditions have been favorable since early spring. A total of 1.52 inches of moisture, most of it as snow, fell during March and an additional 3.52 inches falling during April have put the surface soil in excellent condition for spring work.

Some of the winter wheat on heavy upland soils did not germinate until late winter or early spring because of the dry condition of the soil up to that time. About 25 per cent of the wheat acreage in this county has been abandoned and the remaining 75 per cent is estimated to be about 75 per cent of normal condition at this time.

Winter rye has made a very good growth and is fully headed at this time. Spring small grains are making a good growth. Potatoes have not emerged as yet.

Early spring plowing and listing were completed during the first half of April. Plats that were fallowed last year were cultivated with a spring-tooth harrow to kill the young weeds that were starting and to prevent soil blowing. No soil blowing has occurred thus far.

The wind velocity on April 10 ran very high, averaging 40 miles an hour for the six-hour period between eight o'clock in the morning and two o'clock in the afternoon. At two o'clock the velocity was between 48 and 50 miles an hour as recorded by a two foot anemometer. The weather bureau station at Dodge City, 50 miles east of here, reported a wind velocity of 58 miles an hour. Considerable damage of minor importance occurred throughout this section of the State. No serious damage was done on the station.

The precipitation occurring since the last report is as follows: November T, December .65, January .24, February T, March 1.53, and April 3.52, or a total of 5.94 inches. The minimum temperature for the winter was 15 degrees below zero on the night of February 28. The maximum temperature for April was 85 on the 15th and the minimum was 26 on the 19th.

Maximum temperature 87, on the 5th; minimum 41, on the 4th; precipitation 0; evaporation 1.071 inches.

HAVRE:

The past week has been cool with a maximum of 64 degrees on the 3rd and a minimum of 34 on the 5th. Total precipitation for the week amounted to .56 inch, which fell Sunday and a part of Monday. Wind velocity was high on three days and this has dried the soil rapidly.

The following shows the precipitation by months, to date, for 1922, compared with the average from 40 years records.

Havre, continued:

Month	Precipitation for 1922	40-year average
January	.19	.77
February	.76	.46
March	.27	.49
April	1.39	.84
	2.61	2.56

Since Tuesday of this week soil conditions have been favorable for field work. The small grains were seeded on the 3rd, continuing to the 5th. The seed bed has been prepared for over a week and the seeding delayed in order to allow the Russian thistle to start. A harrow preceded the drill with very satisfactory results in preparing a clean seed bed.

Dr. Cook, of the Entomology Department of the Montana State College, who is stationed here for the summer, reported that there are a few Pale Western cut worms now large enough to start feeding on the winter grain. They are small but in places are numerous. Some farmers report Army cut worms as being numerous. The Army worm is further advanced at this time than the Pale Western worm.

Mr. M. L. Wilson and Mr. Selby, of the State College, who were reported last week as being in this locality on a farm survey, have returned to Bozeman, but will return in a week or two and resume the work they have started.

HAYS:

The weather during the week has been warm, the extremes having been 87 and 44 degrees. Light to heavy showers have occurred in adjacent vicinities. A light shower occurred here yesterday, accompanied by a trace of hail. The precipitation measured .18 inch here. There was none in Hays, one mile north. It was very much heavier south of here, both rain and hail.

A small tornado occurred eighteen miles east Thursday. The cloud was observed from this place. The storm might have been called a big whirlwind, perhaps, but it was of sufficient size and strength to destroy considerable property, which happened to be within its path.

Crops are making good growth. Winter rye is now 12 inches high and beginning to head. Winter wheat that survived on fallow ground is about the same height and looking very good, in fact, it is making most too much growth. The winter wheat that germinated this spring is making some growth and in places is beginning to make a little upright growth, as if it might make a few heads.

During the first two days of the week no team work could be done in the fields, on account of wet ground, but since that time the entire time has been spent in field work. Corn was planted on the project Friday, the 5th. Soil sample work was resumed also on Friday. Spring sown grains are looking good.

HUNTLEY:

With the exception of Monday, field work has been possible every day during the past week. Drying winds have put the surface soil in excellent tillage condition and by using three outfits of teams and equipment the ground for small grains was quickly prepared for seeding. Planting of wheat and field peas will be completed today.

Winter wheat and rye have benefitted by the present warm weather and are making a good growth. All plats seem to have a full stand and though weeds have

Huntley, continued:

made their appearance in the wheat it is doubtful if they can successfully compete with the grain, judging by the comparative growth.

Maximum temperature 75, minimum 31; precipitation .78 inch.

JUDITH BASIN:

A precipitation of .42 inch was received on April 30, which marked the termination of a rainy period of ten days. Cool, clear weather and high winds prevailed during the remainder of the week.

The temperatures have been too low to permit a rapid crop growth, but the conditions have been very favorable to the stooling out of winter wheat. Winter wheat is in excellent condition and a perfect stand survived the winter on all but a few plats which were damaged by grasshoppers last fall. Winter rye did not fare as well as winter wheat but satisfactory stands were obtained on all plats. Brome grass has made a rapid growth but alfalfa and clover have been rather backward.

Due to the soil being too wet, the resumption of field work was not possible until May 3. Plowing, double-discing, and harrowing on the rotations and sunflower experiments were completed, and wheat, barley, oats, and flax were seeded on both rotation fields. With the exception of the nursery, the seeding of all small grains on the Cereal Project was also completed.

Maximum temperature 59, minimum 30; precipitation .42 inch.

LAWTON:

Field work which was interrupted since the 22nd of April was renewed on the afternoon of May 5. Excessive rainfall during the latter part of April was responsible for the delay in field work.

Land that was plowed in the fall or early in the spring and thoroughly worked down is hard and in many instances quite weedy. Late spring-plowed land is not so hard nor so weedy. A heavily weighted harrow is loosening the surface very nicely and destroying a mass of small weeds. In some places where the weeds are too large to be destroyed by the harrow, the work will have to be done with a disc.

Alfalfa, winter wheat, oats, and barley have all made very satisfactory growth during the past week. A few alfalfa blooms are now in evidence.

A very satisfactory stand was finally obtained on the April 15 planting date of grain and forage sorghums. Wet soil delayed the May 1 planting until May 6.

Planting of all spring crops will begin as soon as the ground has been harrowed or disced.

Infestation of chinch bugs on the wheat plats is as heavy as has ever been noted on the station. A few bugs are also showing in the adjoining corn plats.

Three rains during the week amounted to 0.64 inch.

Maximum temperature 85, minimum 56; but little wind movement has occurred during the week.

MANDAN:

Agronomy.

The past week has been warm as compared with the normal temperatures for the same period. The average maximum temperatures for the first five days of May was 70 degrees, while the nine-year average for the same period has been 61 degrees. The minimum temperature of the same periods averaged 43 degrees and 38 degrees respectively.

Mandan, continued:

High winds prevailed on three days, which delayed field work to some extent. Light rains fell on the 5th and 6th. Fine hail fell for a few minutes on the afternoon of the 5th.

Wheat emerged early in the week. A good stand has been secured on all plats. However, spots occur in some of the plats where the seed dropped into dry soil and did not germinate along with the rest. Oats appeared the middle of the week and barley at the end of the week.

Breaking in Field F was completed early in the week, and has been partly worked down. This work has been delayed because of dry weather and the demands of other work on the station.

Alfalfa and sweet clover varieties were seeded on May 1 and 2, for the Office of Forage Crop Investigations. Seeding of brome grass has been delayed because of the high winds. Land for the alfalfa nursery is ready for seeding but this work has been delayed on account of rains at the end of the week. Sunflowers in the silage test were planted on April 29.

The growth of brome and wheat grass made fair progress, but the growth of alfalfa is still retarded for the season. There are indications of some winterkilling in the alfalfa nursery.

The Office of Cereal Investigations planted their flax in the date of seeding test on May 1.

The precipitation for the month of April was 0.66 inch, or 1.00 inch below the 45-year mean for April. The total precipitation for the year to April 30, inclusive, was 3.01 inches, or 0.61 inches below the 45-year mean for the same period. Maximum temperature 78 degrees, minimum 37 degrees; precipitation 0.54 inch.

Cooperating Grazing Experiment.

Native vegetation has made fair progress during the week. The amount of new growth is above normal for this time of year, but is not as far advanced as would be expected from the early start of growth.

The sheds which blew down during the wind storm of two weeks ago have been repaired. A concrete water trough has been constructed at the corrals.

Arboriculture.

Shipping of shelterbelt stock to cooperating farmers was completed the 4th. Five hundred and fifty-eight separate shipments were made, many containing more than one bundle.

Planting of species testing blocks of poplars, willows, Norway maple, American beech, large-tooth aspen, concolor and balsam fir, and Englemann spruce, was done Tuesday and Wednesday.

The seeding of ash, caragana, and Russian olive has been completed, and the planting of cuttings has been begun.

NORTH PLATTE:

The week has been warm and dry. All crops have made a good growth, following the rains of last week. On summer tillage, winter wheat is covering the ground in good shape. Most of the continuously cropped plats show considerable bare space.

Dry-land plats have been prepared for corn and planting will be done next week.

Mr. Clarence Harris reported here May 2 for duty until July 1.

SHERIDAN:

The entire week has been quite favorable for field operations. The Peliss wheat in the check plats and all of the variety wheat emerged during the week.

The alfalfa methods of seeding, sweet clover and field peas were seeded, and the ground plowed for the remaining forage crops. Plowing also was completed today for the corn in the rotations.

Some shrubbery was planted about the station buildings during the week. Of that planted last year a part failed to survive the hot dry summer and the following winter, but the most of it came through in good shape. The fruit plantings from stock received from Mandan also came through well with but a few losses.

Mr. J. M. Stephens arrived here May 6 and left on the afternoon train.

Maximum temperature 73, minimum 30; precipitation .19 inch.

TUCUMCARI:

May 1 plantings of grain and forage sorghums were made Monday, after discing and spring-toothing the ground. Seven acres of sod which was plowed this spring was double-disced, while the MCG plats were given the same treatment.

MCA plats and the spring-plowed rotation plats in the center field were plowed. About an acre of the north field is badly infested with Johnson grass and this land was plowed this spring and has since been spring-toothed several times. All grass will be kept down for a few weeks and then an attempt will be made to fully eradicate this weed by seeding this land to broadcast cane. Cultivation will be continued after harvesting the cane, if necessary.

The south field, with the exception of series one and two, comprising about 35 acres, was spring-toothed the past week.

Conditions are favorable for planting and the planter will be started within a few days; as soon as it is possible to prepare the ground.

Maximum temperature 90, minimum 45; precipitation 0; evaporation 1.614 inches; average wind velocity 6.2 miles.

WOODWARD:

Most of the past week has been clear and rather warm. However, there was some precipitation recorded on two different dates, and this, with the precipitation of the previous week moistened the soil so much that it was not possible to do any field work during the early part of the week.

The Cereal Office second date of planting experiments have been planted. Other work during the week consisted of spraying the orchard, some work on the roads, and a little work in preparation for seeding the latter part of the week. One day was spent in grafting persimmons on a neighboring farm where we are doing some experimental work with different varieties of persimmons.

Maximum temperature 86, on the 5th; minimum, 51 on the 3rd; precipitation .42 inch; evaporation for seven days .947 inch.

MAY 31 1922

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MAY 13 1922

REPORT FOR WEEK ENDING MAY 13, 1922.
(Except as otherwise indicated.)

AKRON:

The week has been characterized by winds of high velocity. It has been reported that considerable damage occurred to recently plowed land on the lighter soils. No particular damage is to be reported from the station, though it is felt that growing crops suffered rather heavily. All spring sowed crops continue to make nice progress. Alfalfa too is responding to the growing weather.

Considerable time was spent in the forestry removing dead trees and picking up pruned off limbs. The station harness was washed and oiled during the extremely windy weather.

Mr. F. L. Kelso visited the station over the week end.

Maximum temperature 82, minimum 34; precipitation .40

ARCHER:

The first two days of the week were very favorable for field work. This consisted of field and plat seeding. Wednesday this work was continued notwithstanding the cold and intermittent squalls. During the early part of the night a blizzard of considerable severity developed. The temperature was not very low but the high wind which had an average hourly velocity of 31.1 miles for a period of 24 hours, in connection with a very wet, heavy snow, made the weather very uncomfortable for all life not under shelter. The storm abated at about 2 p.m. on the 11th, leaving the windbrakes at the station totally covered with drifted snow. Large drifts were also present in some of the fields. This delayed work in these fields for some time.

The seeding of the Dry-land plats was in progress when the storm came. This work will be resumed Monday.

Climatic data: maximum temperature 72, minimum 26; precipitation .38 inch.

BELLE FOURCHE, report May 6:

The weather during the past week has been favorable for field work and warm enough to start crops growing rapidly.

Alfalfa and brome grass are now about three inches tall. All spring sown grain on the Dry-land rotations came up during the week.

Plowing for corn, potatoes, and sorghum has been completed. All of the soil was so wet that it worked down in poor condition. The seed bed for these crops will no doubt be very lumpy unless rain enough to mellow the soil comes within the next few days. It is expected that the corn and potatoes will be planted next week.

Winter grains are making very little progress and are not much further advanced in growth than spring grains now.

Maximum temperature 75, minimum 34; precipitation .01 inch.

BELLE FOURCHE:

The week was generally cold and stormy. During the latter part of the week a high northwest wind blew almost continuously. For about 36 hours the wind reached the intensity of a gale. On the 11th an average velocity of 31.5 miles per hour for the 24 hours was recorded. This is nearly five miles per hour higher than has ever been recorded here for any day during the growing season.

The continued high northwest wind caused some damage to the irrigation dam at Orman. About 60 feet of the concrete facing blocks were dispoiled. It will cost about $1,000 to repair damages.

Belle Fourche, continued:

The amount of rain at Newell was not large, but at other points in this section there were very heavy rains. At Spearfish there was five inches of rain in five hours. The Belle Fourche River and most of the creeks flowing into it were out of their banks for several days, due largely to rains northwest of here. About three miles of railroad was washed out near St. Onge, and consequently there was no train service here for several days.

Small grains are looking rather bedraggled after the beating rain. It is feared that the ground has become so badly crusted that small seeded crops will not be able to emerge.

There was rain on six days during the week, the total being 1.17 inches. Maximum temperature 80, minimum 34.

BIG SPRINGS:

Weather conditions this week have been very favorable for farm work with the exception of one day when a standstorm prevailed. The soil has been packed and leveled by the previous hard rains so that considerable soil movement occurred. However, the wind was not strong enough to do any damage.

The winter wheat plats, which were not seeded last fall because of dry weather were seeded to millet on May 8; the second date of planting of sorghums and cotton was also made at this time.

The work for the remainder of the week has consisted mainly of discing to stop soil blowing and in preparing seed bed. An excellent seed bed has been prepared on the Dry-land field, so if the weather permits, the planter will be started Monday.

Maximum temperature 93, minimum 53; precipitation 0.

COLBY:

The past week has been one of the windiest that we have had this season. On Thursday from 8 a.m. to 8 p.m., with the exception of a short lull from 3 to 4 p.m., the wind averaged 45 miles per hour. On Tuesday, Wednesday, and Thursday the wind velocity was a very disagreeable factor in farming operations. The tips of the leaves on the small grains were whipped and beaten until about four inches of the tip of the leaves are frayed and dead. Several traces of precipitation fell during the week, most of which were merely traces. The evaporation for the three days that the wind velocity was the greatest exceeded one inch. On the night of the 10th, some time after midnight, several - six or eight - real cyclonic twisters passed over Thomas County. They dipped very close to the surface of the earth at times, but none succeeded in getting close enough to the earth to do any damage.

The corn plats on the D.L.A. Project were planted on the 11th. The corn variety test of 15 varieties was planted on the 12th. Commercial planting of corn on the station was about half completed. The soil is working mostt and the seed is going into moist soil.

Spring grains and winter wheat continue to grow and have a good color. Winter wheat on fallow plats is about knee high.

A trip was taken this afternoon, Saturday, into Rawlins, Cheyenne, and Sherman Counties (lying north, northwest, and west of here,) mainly to study crop conditions. Winter wheat has a good color and appears to be growing nicely. There are many thin fields, some so thin that they will be abandoned later for either summer fallow or for sorghums; while several fields are being listed to corn now. Corn planting is about half completed over the area visited. The average amount of corn being put in is apparently from 40 to 80 acres per farm, some less, a few, more. This is, of course, more by far than has been common the

Colby, continued:

past few years. Winter wheat on summer fallow shows in almost all instances a better stand and is much ranker than winter wheat on other treatments. Several farmers talked to are favorably impressed with the present prospects for summer fallowed wheat and for this reason probably a great deal of thin wheat will be abandoned for summer tillage. The prevailing opinion is that present prospects are better than at this time last year.

Visitors for the week included the agriculture class of the Rawlins County High School, the Rawlins County County Agent, and the Sherman County County Agent.

Minimum temperature 32.5; this permitted frost in low areas.

DALHART:

The past week has been cool and windy. For the first four days the wind was continuous. A part of this time the fields were too wet to do any cultivating and the sand was readily picked up in clouds. Very little drifting occurred as the sand got too good a start to lodge in so short a distance. The places where soil blowing occurred were fortunately in places where no damage resulted. All the small grains were in protected areas and weathered the storm in good shape. As soon as the soil dried sufficiently the blowing strips were cultivated. The cause of all the soil blowing was a rain which occurred about 12.30 p.m. Sunday. This rain blew up suddenly in a very severe wind and was accompanied by small hail. The storm lasted possibly twenty to thirty minutes, and in that time .88 inches of precipitation fell. There was a large part of this lost in run-off, especially on the prairies. In some sections south and west of Dalhart, it is reported that the hail was damaging and drifted into places several feet deep. No serious damage resulted from the hail at Dalhart.

During the windy days, while the fields were too wet to work the time was spent in setting up machinery which arrived during the week. Since the fields have dried off sufficiently, both teams have been in the field. It was so late in the week when the soil dried sufficiently to work, that no plowing was started. Two plows will be started the first of the week, if weather conditions will permit. Work is at least two weeks in advance this year at this station. Weeds are thoroughly under control and everything is clean, due to the work that has already been done in the fields. The first date of Sudan is up to a good stand, but the other date crops are not up yet. The milo, Bishops and dawn kafirs, feterita and sumac are just beginning to emerge. These have all been harrowed since the rain to break the crust.

Climatic date: maximum temperature 82, minimum 37; precipitation .83 inch with some hail. First four days were unusually windy and cool for this time of year. The remainder of the week has been more favorable as far as wind is concerned, but has been rather cool.

DICKINSON:

The weather has continued cold and cloudy and very windy, with good rains at the end of the week. Rainfall in May to date is 1.44 inches and precipitation for the year to date is just normal. All vegetation is still backward due to the low temperature. This was the first week that any feed was available in the pasture.

Corn was planted on the Rotations on the 10th. A field of Gehu for feed was planted on the 9th. The main field of Northwestern Dent for silage and the varieties will be planted the first of the week if the weather permits. Sunflowers for silage were planted on the 13th.

Dickinson, continued:

Winter rye in this locality has come through in splendid condition. Winter wheat on fallow was almost a complete failure in the nursery, where something like 1500 seedings were made by the Cereal Office. The varieties of winter wheat in standing corn stubble came through with the best stands in several years.

Alfalfa and sweet clover tests were seeded during the week ending May 6. Both alfalfa and sweet clover are now growing rapidly, but are not as far along as brome, slender wheat, and crested wheat in the Forage crop trials. Of these grasses brome has made the greatest growth to date. Arctic sweet clover from last year's seeding seems the most promising of the sweet clovers.

Visitors during the week included Mr. U. J. Downey, Superintendent of the Hettinger Substation. Mr. Downey was particularly interested in the dairy herd at this station.

HAVRE:

A slow rain on the 8th, totalling .69 inch stopped field operations until Wednesday the 10th. The last three days have been cloudy and cool with a steady northwest wind blowing almost constantly.

Temperatures have been too low for rapid growth. Native grass is making a very good start, but is still short. Winter rye is growing, the ground being well covered in most fields. Brome grass, slender wheat, and crested wheat grass have made very satisfactory growth in the row plantings. At present these grasses in rows are much ahead of the same grasses in broadcast plats, and are decidedly better than the native grasses.

The plantings of peas, pea-grain mixtures and sweet clovers were made in the forage crop project during the week. The larger blocks were seeded, as well as the plats in the cut worm control test. Plowing for corn and flax is under way.

The army cut worm seems to be present in many localities this spring. This worm is still immature and has not come together in droves yet. It is difficult as yet to say whether this worm will cause much damage to crops or not.

The Pale Western cut worm that has caused so much damage to crops in this part of Montana and southern Canada, is still small, being generally in the second and third instar. From the time of hatching to the third or fourth instar this worm generally feeds above ground. So the most noticeable work at this time is on winter and volunteer grain. It is also early to tell how numerous this worm will be.

Maximum temperature 72, on the 7th; minimum 32, on the 10th; precipitation .69 inch.

HAYS:

The weather during the past week has been varied. During the first part of the week there were three days of continuous heavy wind without a stop. It was the longest continued and the heaviest wind for several months. The wind suddenly ended Wednesday night with the conclusion of a heavy storm which broke soon after dark, and caused considerable damage in certain small communities. In this vicinity no serious damage was reported, but one of the little twisters reported in adjoining vicinities passed over a pasture 18 miles southwest which the station has leased. The storm completely demolished the herdsman's house and destroyed one half mile of fence. This loss falls upon the station.

The last three days of the week were as extremely quiet as the first three were windy. The rainfall for the week amounted to .37 inch.

Corn planted on the plats May 5 was coming up the fifth day after planting. It is now up to a good stand. Fall germinated wheat on the fallow plats

Hays, continued:

is now 18 inches high and the growth is heavy. Spring germinated winter wheat is from two to six inches high and beginning to make some stalks. All spring seeded small grains are making fine growth.

The tips of the blades of all the small grain crops now show a burnt appearance, as if scorched by hot winds, although there were no hot winds during the stormy part of the week. The brown looking effect can be seen for some distance, but it is not believed any of the crops are injured.

Work during the week included harrowing of the corn plats at the time when the corn was just beginning to emerge, general weed destruction by various forms of cultivation, finishing of seed bed preparation for the sorghum crops, seeding of the sorghum crops on the plats (which is being done today,) and soil moisture work.

HUNTLEY:

With the exception of Monday no field work has been possible this week because of rain. On Monday all oat plats in the rotations were seeded and also the barley plats in the pasture experiments.

Winter grains continue to make satisfactory growth. Winter wheat on disced corn ground appears to be somewhat in advance of the other methods of seeding. The crop on these plats was the first to come up and at present is well matted, while on fallow, green manure, and the continuous cropping treatments, the winter wheat does not look so well, but is more spindling in its growth.

Maximum temperature 72, minimum 34; precipitation .87 inch.

JUDITH BASIN:

The weather during the past week has been very unsettled and cold with exceptionally high winds prevailing during the greater portion of the time. Rain occurred on four out of the seven days and although a total of only .59 inch of precipitation was received, it was sufficient to seriously delay and interfere with field work. With the exception of the first day of the week when a maximum temperature of 64 degrees was recorded, the maximum daily temperatures varied from 47 to 55 degrees and the daily minimum temperatures ranged from 30 to 37 degrees.

Because of the cold weather very little crop growth has taken place. The condition of winter wheat has continued to improve on all tillage methods except the fall plowed, subsoiled, and listed plats of the continuous cropping series. The wheat on these plats has made but very little improvement and the stands do not appear to be as good as they were a week ago. Winter rye has shown great improvement on all plats and made considerably more growth than winter wheat.

Field work has been devoted largely to the plowing, discing, and harrowing of the various plats of the Forage Crop Project to be seeded this spring, and to the preparation of all other land for seeding which is to be used for sunflower, potato, corn, and other experiments. The Cereal spring grain nursery and small increase fields of Marquis, Peliss, and Hard Federation Spring Wheat were seeded and a large number of tree plantings were made in blocks of the shelterbelt experiments.

LAWTON:

The total precipitation for the week amounted to 4.20 inches. On the night of the 7th a torrential rain to the amount of 3.54 inches fell with considerable damage to crops, roads, and cultivated fields throughout most of the

Lawton, continued:

county. This rain was general over most of the state and many places report five and six inches. The Weather Bureau gauge at Lawton recorded 4.30 inches. The total precipitation for May up to the present date is 4.35 inches.

The second date of grain and forage sorghum plantings was made May 6. Part of it has been complete washed out. The first date of sumac and Sudan grass has also been severely injured by washing soil. Wide, deep ditches have been washed out in many of the rotation plats and in several places on the general fields. Weeds are making rapid growth and all fields will require tillage of some sort before any planting can be done.

Field operations have been suspended since the 22nd of April. Alfalfa on two general fields was cut on the 12th. The yield will be rather light except on a rather small area.

Oats is just beginning to head. Wheat is just now forming the boot. The vegetative growth of wheat appears to be characteristic of plants that have been severely stunted.

A concrete floor was placed in the machine shed on the 9th.

Maximum temperature 89, minimum 51.

MANDAN:

Agronomy.

The past week has been cool, cloudy, and windy. The maximum temperature was 74 on the 7th and 11th. the minimum was 37 on the 11th. Rain has fallen on six days of the week, with amounts ranging from a trace to 0.34 inch. Total precipitation for the week 0.57 inch.

Small grains are making fair progress. Brome grass and the Crested wheat grass (Agropyron cristatum) have made excellent growth for the season to date. Some of the fields of alfalfa are still backward. Alfalfa seeded in rotation 42 is just coming through the ground.

About ten acres of oats were seeded in the feed fields. Plowing for corn in the feed fields started early in the week, and plowing in the rotations started on the 11th. Potatoes were planted on the 11th.

Work for the Office of Forage Crop Investigations consisted of seeding the alfalfa nursery, brome and wheat grass, and the root crop.

Cooperative Grazing Experiment.

Considerable time has been spent in repairing fences which went down during the winter and during the wind storm of April 22. It has been necessary to rebuild part of the plant corral.

Sixty-five head of cattle arrived on the 12th, to be used in the grazing work. They were wintered at Solon, North Dakota, and were driven to the pasture. Many of them are rather thin but are no doubt in as good condition as most of the cattle wintered in this section.

Native vegetation has made a very good growth, for the season to date and is now in good condition for grazing which is about the average date.

Arboriculture.

All planting of tree seeds and transplanting of deciduous trees was completed this week. Owing to the bad weather, either of wind or rain, planting of coniferous stock was done but two days. Sixteen thousand seven hundred and thirty jack pines were planted Thursday. These have been placed two inches apart in the row instead of four inches as heretofore. This will enable planting of more stock on our limited area, and the results in growth will no doubt be as good, especially if we irrigate them if occasion requires.

About all of the new applications for 1923 plantings have been received, and together with those postponed from last year, give a total for 1923 of 401. These are divided among the States as follows: Montana, 140; North Dakota, 111;

Mandan, continued:

South Dakota 105, Wyoming, 45. This is the largest number of applications for any one year except the first year, 1916.

Horticulture.

Potatoes were planted on May 9 and 10. As was the case last year, work with potatoes is being carried on along three lines; namely, variety testing, distance of planting experiments, and selection work. Strains of the same variety from the Red River Valley, North Dakota, Maine, and from this station, will be tested in the variety testing block.

Pruning fruit trees and grape vines has been in progress during most of the week. The fruit trees are merely given a light pruning, dead, broken and interferring limbs being removed, and a certain amount of thinning out being done. Of course, some trees are pruned more severely for experimental purposes. Grape canes are being thinned out and the remaining canes are being tied to wires.

The acre garden has been planted with the exception of two or three succession plantings. A collection of ornamental shrubs has been added to the arboretum. Tomatoes and cabbages have been transplanted in the hotbeds. Some new shrubbery beds have been planted on the grounds.

(Report for week ending May 6)

Planting has not been completed in the fields, nursery, and on the grounds. It was found necessary to water many of the newly planted trees at the time of planting on account of the dry condition of the soil. However, the rain which fell in the latter part of the week should be of great aid in securing a good stand.

Field planting this year included trees for the new experiment in planting systems, trees to complete the pruning experiment which was started last year, trees for replacements in the various orchards, and new material for the Arboretum. A number of small fruits were also planted in the Variety Testing blocks, seedlings were lined out in the South field for selection purposes, and a large number of plum and sandcherry seedlings were lined out in the nursery for budding purposes.

Planting has been going on in the acre-garden, but up to the last few days it has been too dry for the seed to germinate. Cabbages were set out after the recent rain.

Cuttings made last fall and grafts made during the winter have been lined out in the seed beds, where there will be an opportunity to water them. Watering seems to be essential in order to secure a good stand. Some of the trees are being propagated by the long-cion-short-root method, in order to obtain trees on their own roots for experimental purposes. Such trees should be more uniform as they would not be affected by a variable seedling root.

Trees were sprayed with lime sulphur and arsenate of lead before the buds opened, in order to control such fungus diseases as plum pockets and early attacks of curculio and gouger. Plums will soon be in full bloom.

Potato cutting has been started and the potatoes will be planted in the first part of next week.

NORTH PLATTE:

Growing conditions have been rather unfavorable during the week. High winds have prevailed a great deal of the time. During the entire day on the 11th the velocity was so great that no kind of outdoor work was possible. A slight rain had occurred the day before and this checked soil blowing for a few hours. Much damage was done before the day was over, both from soil blowing and breaking of trees and fences.

Corn on the D.L.A. plats was planted during the week, and on the larger fields of the station planting is well under way.

SHERIDAN:

Shelterbelt stock received from Mandan was planted the first two days of the week. More favorable weather for planting could hardly have been desired. It was cool and cloudy while the planting was being done, and a steady rain followed for the next two days, soaking the ground thoroughly. The last two days have also been cloudy and cold, with a heavy wind and frequent light showers. Other nursery stock received with the shelterbelt stock from Mandan has been planted during the last two days.

Wheat, oats, and barley seeded in the rotations emerged the first of the week.

Maximum temperature 78, minimum 31; precipitation 1.62 inches.

TUCUMCARI:

Although the average wind velocity for the week was only nine miles per hour, on three days the anemometer registered at the rate of twenty miles per hour from 7 a.m. until sundown. This necessitated cultivating the south field with big shovels to prevent blowing. The past two days have been very quiet and ideal crop growing weather; nights are still so cool, however, that crops will not make rapid growth. On a trip to Dalhart, Texas, last week end, it was apparent that pastures would soon be excellent; cattle were looking much better than one could expect, as the recent rains had given the grass a good start.

Plats which were cropped to cowpeas or which were fallowed last year, north field, were double disced this week. Some time was spent in digging isolated patches of Johnson grass in this field, while the large patch was again spring-toothed.

A number of plats in the center field were double disced or spring-toothed to kill weeds or prevent blowing.

Eight variety plats of grain and forage sorghums which were planted the 1st of May emerged from the 11th to the 13th. If weather conditions are favorable, the variety plats will be planted the coming week. Two strips of increase land have been planted to dwarf milo, while the variety cowpeas and the alternate cowpeas and Sudan in the south field have been planted. No other planting has been done to date.

Maximum temperature 83, minimum 43; precipitation .96 inch; evaporation 2.532 inch; average wind velocity 9.0 miles.

WOODWARD:

The weather for the past week has been variable; starting out with a precipitation of 2.60 inches, falling Sunday afternoon and evening, almost 2 inches of which fell in about one and one-half hours. This heavy rainfall was followed by one of the heaviest winds of the season, with considerable soil blowing. The wind velocity averaged about 22 miles per hour for eleven hours, 18.8 miles per hour for forty-eight hours, and 15.8 miles per hour for ninety-six hours. There was very little wind movement the latter part of the week.

The Winter wheat on plats which started well last fall is beginning to head, and Winter rye has been headed for some days and is now blooming.

The wheat over the country is, on the average, very poor and apparently there is going to be a very large acreage of row crops planted. We have had a very large trade in pure seed but at present are practically sold out of this seed.

The work during the week has consisted of trimming small grain plats, cutting rye check plats for hay, preparing plats for planting kafir and sumac on Dry-land Project, discing orchard and vineyard, and some plowing and discing in preparation for various crops. Some pruning also has been done on grapes and

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 20 1922

REPORT FOR WEEK ENDING MAY 20, 1922.

AKRON:

The past week has been very hot and humid for this season of the year. Vegetative growth has been very marked. All plats are showing up well except the rotation winter wheat plats. Winter wheat on the Cereal Project is showing up well. Rye and alfalfa are making very rapid growth. Comparison between the winter hardiness of winter wheat and rye is very marked on the rotation plats this spring. Rye stands are good and the winter wheat plats vary from practically nothing up to perhaps 30 per cent stands.

Forest trees are coming into leaf. Apples and cherries in the orchards are in bloom. Plum and pear blossoms are practically gone. Indications are that there has been a heavy set of fruit on the plum and pear trees.

Rotation corn plats were seeded about the middle of the week. Three acre increase field was made ready for seeding corn the first of the week. The Cereal Project corn strip was double disced and made ready for listing corn the first of the week. Rotation and Cereal Project plats were trimmed and the rotation roads worked to kill weed and grain growth.

Mr. F. L. Kelso visited the station the first part of the week. Mr. D. A. Jay, Extension Animal Husbandman of the Colorado Agricultural College, visited the station the middle of the week.

Maximum temperature 82, minimum 33; precipitation .07

ARCHER:

The week ending May 20 has on the whole been very favorable for field operations. A seeding of Dry-land plats was finished May 18. Most of the plats were in good condition. All fall-plowed and spring-plowed corn plats were rather cloddy and rather rough. Some of these plats received extra preparation before seeding.

There is still considerable plowing being done, but most of the farmers are finishing the seeding of small cereals and are in the midst of corn seeding. A considerable acreage of sunflowers are being seeded for silage.

The prairies are green and the grass is well advanced for this season of the year. There has been some poisoning from larkspur and a few cases have proved fatal. The trees are beginning to show the first leaves and some of the fruit trees are about to bloom.

Climatic data: Maximum temperature 74, minimum 27; precipitation 0.07 inch.

BELLE FOURCHE:

The first four days of the week were cold and stormy, though the amount of precipitation was not heavy. The 18th, 19th, and 20th were devoted to planting corn and potatoes. The corn in the dry land rotation was planted on the 20th, and the potatoes on the 19th.

The soil on the spring-plowed plats worked down so that it was in excellent condition at the time of planting.

Soil samples taken during the week showed that the soil in the plats that are to be fallowed this year is filled with moisture to a depth of three feet.

Alfalfa and brome grass are now making rapid growth, and indications are that there will be a good first cutting of both of these crops.

Maximum temperature 79, minimum 37; precipitation .36 inch.

BIG SPRINGS:

The weather this week has been warm and would have been very condusive to field work if the soil had not been so wet. Another rain of 1.60 inches fell Sunday, May 14, which soaked things up in good shape and also delayed planting several days.

The May 15 date of planting was not made until May 20. At present two planters are being kept busy, so if the weather permits, the plats will all be planted within the next two or three days. Cotton, cowpeas, kafir, and sumac have been planted in the Dry-land project, and a field of about 12 acres, which dried off before the plats, was also planted.

Other work of the week consisted mainly of hoeing out the orchard and vineyard, and in trimming up the yard.

Cherries have started to ripen, but are not yielding very heavily. The New Century and the Early Richmond are showing up fairly well, but the Marinelle trees have only a very few cherries on them.

Maximum temperature 89, minimum 42; precipitation 1.47 inches.

COLBY:

The week just closing has been one of the best that we have had for field work this spring. The commercial planting of corn was finished on the 16th. None of the plats which were planted on the 11th have as yet showed above the ground. The ground was getting rather dry where it had been lately worked, until a rain Friday night of .72 inch fell which should moisten the seed bed in good shape. All fallow plats were plowed during the week, except some of those in the Method of Fallow series. The ground turned over loose and mellow. The spring-toothed plats for milo, kafir, and beans were also plowed and worked down, as were the fall treated plats for milo and kafir. These plats left a good seed bed for the crops which will go in them. It may be possible that they will have to be worked again if the rain continues long enough to pack the ground on top, or to start the weeds.

Winter wheat plats continue to show good growth and to have a good color, with the exception of the plats other than fallow which show considerable number of yellow leaves near the base of the plant. Spring cereal grains show good color and growth.

Corn planting is practically completed in the county at the present time.

DALHART:

The Panhandle has been visited twice with rain since the writing of the last report. On the night of the 14th a total of .51 inch was recorded. This spoiled all preparations for planting on the 15th. Again on the night of the 16th another rain, totaling .34 inch occurred. This was sufficient to keep the teams out of the fields for several days. The days have been rather cool during the past week with the exception of the last three which have been good growing weather.

All the first date of planting has emerged. The sumac was the last to emerge, having come up so as to distinguish the row on the 18th. The other varieties in the dates were up the first of the week. The second date of planting was made on the 18th which was as soon as planting could be made on account of the rain.

During the first part of the week, while the fields were too wet to work, some necessary hauling was done with two teams, from Dalhart. The new manure spreader was assembled Monday of this week. During the remainder of the time while the fields could not be worked odd jobs were accomplished, such as fixing fence, etc. Field operations were commenced at noon on the 18th. The date plats

Dalhart, continued:

were prepared for planting and the planting made. Manure was hauled and spread on the two manured plats of Rotations 87 and 89. Plats B of these two rotations were manured at the rate of 5 tons per acre. The plows and disc have been in operation the remainder of the week. The spring-plowed plats of Rotations 84, 87, 88, and 89 were plowed on the 19th. The winter rye on Plats A of these rotations is not sufficient to take any yields from. The stand is only about 5 per cent on the unmanured and 10 per cent on manured plats. That is where rye follows on a plat that was previously manured for corn or Sudan. The rye stand is very poor on most of the plats. Two or three plats have a good stand.

GARDEN CITY:

Climatic conditions have been very favorable for field work during the past two weeks. Rain has occurred on four different dates. Three of these rains were almost entirely absorbed by the soil, but the precipitation that fell last night came as a hard, dashing rain and a great deal of it was lost through run-off. Some hail fell last night but did no damage on the station. Nearby districts report damage from hail, however.

Most plats of small grains have been trimmed and roadways have been cultivated during the past two weeks.

All fall and spring-plowed plats to be planted to rowed crops have been cultivated with a springtooth harrow to kill the young weed growth and to put the surface soil into good condition for planting. Fall listed plats that were lister-cultivated earlier in the season have been double disced.

Two plats of winter rye were turned under for green manure. The remaining two plats have not made their maximum growth as yet and will be plowed under later. The last mentioned plats are on less favorable land than the two that have reached their maximum growth.

The first date of planting with sorghums was made on the 16th.

Potatoes have emerged to a fair stand.

Corn and cowpeas will be planted the first of next week, and sorghum planting will follow closely thereafter.

Maximum temperature 87 (two weeks), minimum 36; precipitation 1.95 inches; evaporation 3.538 inches; average hourly wind velocity 9.7 miles.

HAVRE:

Growing conditions have been very good during the last week. All grain on the rotations is through the ground and excellent stands have been obtained. Plowing for corn and flax was completed and partly worked down. Because of weed growth and cut worms it is planned not to plant either of these crops until nearly June 1. Winter rye is jointing and has made a very satisfactory growth to date. Varieties of wheat, oats, and barley emerged the last of the week.

The total precipitation for the week is .71 inch, recorded in three showers. The maximum temperature was 79 degrees and the minimum 32. There was, however, no frost that was noticable.

Native grasses are making a very good growth. Some of the early varieties are showing head the last few days. Domestic grasses and alfalfa are also growing rapidly.

Mr. M. L. Wilson of the Montana Extension Service returned to Havre during the week to resume the Farm Survey work started about three weeks ago.

HAYS:

The weather during the past week has been warm and dry. Temperatures ranged from 88 to 41 degrees. The ground is getting dry and the crops are be-

Hays, continued:

ginning to show want of rain. All small grains are wilting during the day. It is a good set-back or check for the wheat on fallow ground, but a little severe on the spring grains. Thus far no real injury is noted, but rain is needed.

HUNTLEY:

Flax, alfalfa, brome grass, and sweet clover were seeded in the rotations and some miscellaneous plantings were made in field "G" during the week. Preparation of the ground for corn is practically completed in the rotation field and is well under way in the pasture and miscellaneous experiment field.

Spring wheat, oats, and barley are germinating well and in some instances are about ready to come through the ground. Winter wheat, where it has reached the tillering stage, appears to be at a standstill, but where the plants have not yet begun to stool, a spindling growth is being made. This latter condition is particularly noticeable where the winter wheat is planted on fallow or continuously cropped plats.

Reports reaching the station regarding the condition of winter wheat throug out the county are discouraging. Stands are generally poor and growth is unsatisfactory. The majority of the poor stands seem to be the result of shallow seeding in a dry seed bed, which caused the crop to germinate following the light showers of last fall, and finally die out from lack of sufficient moisture. Many farmers have already reseeded their winter wheat land to spring wheat, while others are substituting corn or fallow.

The late season togehter with the poor showing being made by winter wheat has resulted in a rather heavy demand for seed corn in this locality.

Maximum temperature 75, minimum 35; precipitation .09 inch.

JUDITH BASIN:

The past week has been comparatively warm and the most favorable to crop growth and field work that has occurred this spring. Several light showers were received, but the amount of precipitation was not sufficient to be of much benefit. The soil contains an abundance of moisture, however, and despite the lateness of the season crop prospects are exceptionally good.

Winter wheat, alfalfa, winter rye, brome grass, and pasture grasses have made a very rapid growth during the week. Winter rye is commencing to joint; alfalfa and brome grass are about six inches high and winter wheat has a vigorous appearance on all plats except B, E, and F of the continuous cropping series. Spring wheat, oats, barley, and flax seeded on the rotations last week came up within seven days from the date of seeding and good stands were obtained on most all plats. As a general rule, it takes about two weeks for the small spring grains to come up and last year a period of four weeks elapsed between the date of seeding and the date of emergence.

Field work has been devoted to the preparation and seeding of increase fields of small grain; planting corn and sunflowers; seeding annual forage crops, sweet clover, alfalfa, and grasses. About 1000 plantings of conifers were made in the shelterbelt experiments. Potatoes were also planted. All seeding of small spring grains at this station has been completed.

Maximum temperature 78, minimum 31; precipitation .25 inch.

LAWTON:

Field operations, suspended since April 22 by wet weather, were renewed May 13. Most of the surface soil is hard and compact, some of it quite weedy, and in many places it is badly washed out.

Lawton, continued:

The disc and harrow is preceding the planter on all land that is to be put into row crops. All of the row crop plats in Field A have been disced and harrowed. All such plats in Field B have been disced. One of the cooperative cotton fields has also been disced and harrowed.

The following planting was done on the 19th and 20th. All cotton plats in Field A; M. C. broom corn and sorghum plats; L. M. kafir plats; M.C.G & H kafir and milo plats; Rotation 134D kafir; and Rotation 204, including kafir, cowpeas, and cotton.

All corn plats were cultivated on the 20th. All corn plats were thinned on the 18th. Alfalfa on Rotation 142 was cut on the 17th. The row plats yielded 500 pounds per acre, while the broadcast plat yielded at the rate of 1050 pounds per acre. Two increase fields of alfalfa, seeded on very thin soil, were also harvested during the week. A very light yield of 4660 pounds was obtained from the two fields. The May 15 date planting of grain and forage sorghums was made May 18.

Precipitation in the form of three showers, totaling 0.45 inch prevented any field work until Thursday. A week of good weather will make it possible to nearly complete planting of all experimental work.

Dr. C. T. Dowell, Director of the Experiment Station at Stillwater, Oklahoma, visited the station on the 13th.

The application of the first coat of paint to all buildings has been completed. Work on the second coat has been under way for a couple of days.

Corn has made a very good growth and oats is practically in full head. Wheat is in the boot.

Maximum temperature 92, minimum 50; total precipitation for May to date 4.80 inches, from April 1 to date 11.65 inches; wind velocity, considerably below normal.

MANDAN:

Agronomy.

Most of the days of the past week have been cool and windy.

Small grains are making fair progress and the later plantings in the feed fields are now up.

Corn was planted in the rotations on the 17th. Corn varieties for the Office of Cereal Investigations were planted on the 18th. About 10 acres of corn was planted for feed. Corn planting will be completed today.

Alfalfa and sweet clover which were planted early in the month are now through the ground and show indications of producing a good stand.

Maximum temperature 69, minimum 36; rain fell on five days in amounts ranging from .03 to .34 inch.; total precipitation for week 0.65 inch.

Cooperating Grazing Experiment.

Native vegetation has made an excellent growth during the week and now furnishes abundant feed for stock.

The cattle have been branded and the first weighing will be made today.

Arboriculture.

The planting of conifers was completed the 17th. About 80,000 two year seedlings were planted, consisting of Jack, Scotch, and Western yellow pine and White spruce. Experimental plantings of two year seedlings were made of Balsam, Fir, Englemann spruce, White cedar, and red (Norway) pine. A sample of forest-pulled yellow pine, and Black Hills spruce were obtained from the Black Hills for trial.

Mandan, continued:

Picking of American and Chinese elm seed is in progress and as much as may be desired of the American elm seed is available. All the Chinese elm seed will be picked and planted, as this is the first time the seed has come to maturity since 1916. It is hoped a good stand of seedlings will be obtained.

Cultivation of all tree blocks and fields has begun.

Horticulture.

Most varieties of plum trees have been blooming heavily during the past week, and apple trees are now starting to bloom. We have not as yet had a killing frost during the blooming period and it seems likely that there will be a good set of fruit.

Some outdoor crossing has been attempted on Opata and Wyant plums. It will be interesting to compare the set of fruit with that obtained by crossing in the greenhouse.

Different vegetables are now coming up in the acre-garden and as far as has been observed good stands have been secured. The plantation of asparagus, now in its third year, is doing very nicely. Redding Giant is yielding better, but is not quite as early as some varieties of asparagus secured from Washington.

Pruning fruit trees has been completed, and the seedling grapes are also nearly all pruned. A few rows of grapes will be left unpruned, in order to observe the effects of the pruning.

In the breeding work with vegetables, 60 ear-to-row corn selections have been planted, and about 200 hills of watermellons representing 16 different selections. Tomato selections are almost ready to be transplanted to the field.

All groups of trees and shrubs on the grounds have been spaded, and some of the shrubbery is now in bloom. Lawn mowing has been started.

NORTH PLATTE:

Dry weather continues without variation. Total precipitation for the 20 days of May to date has been .23 inch, distributed in five showers. Winter wheat where the stands are good is showing distress. Rye is attempting to head but does not look very promising.

Soil samples taken on land which was summer tilled last year and now in winter wheat, show but 8 per cent of moisture in the upper three feet.

Corn planting on the station will be finished in about two days.

TUCUMCARI:

Weather conditions the past week have been very favorable; field work has been possible all but one-half day. Plants in the May 1 date test emerged about the 11th, while seeds planted in the May 15 plats have sprouted.

The M.C.F. and G plats were listed early in the week and were planted Thursday, when the remainder of the M.C. plats and other plats in the center field were planted. Most plats were springtoothed just previous to planting; this killed a crop of young weeds and seemed good insurance against possible blowing. Sumac was seeded in the west and central portion of the central field; about four acres of each of rowed and drilled being put in.

The remainder of the Sudan grass and cowpeas in alternate rows was planted in the south field, while the variety plats of grain and forage sorghums which alternate with the Sudan and cowpeas were also put in this week. Spacing test plats, dwarf milo, and dwarf kafir, were planted the 17th.

Practically all hands have been working the past two days constructing a tower and raising it. The mill will be put up the first of the week.

Tucumcari, continued:

Maximum temperature 87, minimum 45; evaporation 1.627 inches; precipitation .35 inch; average wind velocity 5.4 miles.

WOODWARD:

Most of the week has been fair and warm and excellent growing weather.

Most of the Winter wheat on the station is now heading and is looking fairly good.

Some of the varieties of grapes in the vineyard are beginning to bloom and fruit has set on a few varieties.

Fourteen plats of Winter rye, which were cut for hay last week were hauled in. The yields varied from 2700 to 4650 pounds per acre, with an average of 3820 pounds.

The orchard has been sprayed for the third time. One plat of cotton on the rotations was planted. The vineyard, orchard, and windbreaks have been disced. Considerable discing and springtoothing has been done in preparation for spring crops on the dairy farm. Sunrise kafir to be grown for seed has been planted, also the third date of planting on the Cereal Project.

Maximum temperature 87, minimum 45; precipitation .31 inch; evaporation 1.869 inches; average wind velocity 5.3 miles.

PLANT INDUSTRY

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BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 27 1922

REPORT FOR WEEK ENDING MAY 27, 1922.

AKRON:

Station was visited by another rain of 1.58 inches the first part of the week which delayed resumption of corn planting till the middle of the week. The rain fell Saturday night in the midst of an electrical storm seldom equalled for intensity. A dash of hail fell which pretty effectively stripped the leaves from the orchard trees and a large percentage of the fruit, though it is safely felt that enough fruit remains to ripen a full crop. The hail did superficial damage to all growing crops, most disastrous to alfalfa which was bruised and cut back very severely. Lightning struck a small honey locust tree in the west orchard tree planting not over 60 feet from the machine shed. The main orchard was disced but the west orchard remained too damp for cultivation this week. The Cereal Nursery has been hoed and weeded. Corn planting was practically completed, competing in addition to the rotation plats some 500 rows and plats of experimental corn.

Mr. E. J. Maynard visited the station the first part of the week, in the sheep experiment. Mr. D. W. Robertson and Mr. Waldo Kidder, of the Agronomy Department of the State College, visited the station Wednesday.

Maximum temperature 80, minimum 41; precipitation 1.73 inches.

ARCHER:

The warm weather with copious rains have caused prompt germination of all crops. All of the small cereals have emerged and good stands have been secured on the Dry-land plats. All of the small cereals in the general fields have been seeded and the corn and sunflowers are being seeded. A larger acreage of potatoes is being planted by the farmers than usual.

Some of the fruit trees at the station are in bloom and hold prospects of setting a large crop of fruit.

Pasture conditions are very good. The prairie grasses have made excellent growth and as a result the live stock of this region are doing very well.

There is an active interest in this region in the irrigation of certain districts by pumping water from wells. The Superintendent visited the Egbert district on Wednesday and there saw a pump in operation throwing a stream of about 3 gallons a second. There are various other projects under consideration.

The station received this morning a new Holstein bull from the University of Wyoming, at Laramie. He is a good individual with very fine breeding. He was at the head of the University herd.

Maximum 77, minimum 38; precipitation .58 inch.

ARDMORE:

Weather conditions during the week have been unusually favorable for the rapid growth of all farm crops. There has not been any precipitation of any consequence, but plenty of moisture is available for the immediate needs of plant growth. This was largely supplied by a rainfall of 1.35 inches on May 10 and 11. The total precipitation from May 1 to 27 has been 1.68 inches, which may be compared with the 10-year normal for the same month at this station, amounting to 3.27 inches. There is no reserve supply of moisture in the subsoil and the production of all crops depends upon the summer precipitation.

Unusually warm weather prevailed during the week which has resulted in a remarkably rapid growth of all cultivated crops and native vegetation. Native grass pastures are now in excellent condition. There is an abundance of range available in the county and a shortage of cattle. Ranchers and cattlemen generally are of the opinion that cattle are too high to warrant stocking up again.

Ardmore, continued:

Practically no steers have been shipped into this section this spring.

Beef cattle used in the grazing experiment at this station were put on pastures on May 2. These steers were carried through the winter at the Field station. When they were taken off pasture on December 20, 1921, their average weight was 662 pounds. They had access to a small reserve pasture during the winter and were fed a mixture of oat straw, sweet clover, and alfalfa hay. Their average weight on May 22 was 656 pounds.

BELLE FOURCHE:

Hot drying winds prevailed during the greater part of the week, and before the end of the week alfalfa was beginning to show the need of water. A rain of .74 inch on the night of the 26th enabled the crop to resume its rapid growth. Alfalfa is far ahead of its usual condition at this time, and cutting will probably commence about June 10.

All grain crops and cultivated crops have enough moisture stored to enable them to grow for some time to come.

Water was turned into the irrigation laterals last week. It is necessary to lower the water level of the reservoir several feet in order to make the repairs necessary. A wooden bulkhead has been erected to protect the damaged portion of the dam.

Conditions on the range are better than they have been for several years. All dams are well filled with water and the growth of grass is now more abundant than usual.

Maximum temperature 81, minimum 42; precipitation .86 inch.

BIG SPRINGS:

The weather has been very dry and warm this week, and as a result everything came to a pretty good stand within a very few days after it was planted. Many of the farmers in this vicinity are planting their cotton over for the third time as a result of the ground baking soon after the rains and before the tender plants could get through.

With the exception of the late date work, all the plats have been planted. The fallow plats in the M.C. series and in the rotations were plowed this week.

Maximum temperature 94, minimum 43; precipitation 0.

COLBY:

Moisture conditions have been good for growth during the week. A rain of 0.87 inches the first of the week kept field work back for the first few days of the week. Corn which was planted on the 11th is up to a good stand on all the plats. All of the early fall-plowed and fallow plats had a full stand the first of the week. The spring-plowed and listed plats did not germinate so readily and the ground crusted over when about 60 per cent of the corn was up. However, all plats show that there will be a full stand, the corn being able to push through the third of an inch crust on top.

Some plowing was done on commercial fields to finish one fallow field and another spring-plowed sorghum field. All roads and field boundaries were double-disced during the week. The orchard was double-disced as were other trees on the station.

A few plats of winter wheat are beginning to show a few heads of wheat. Wheat and small spring grains have a good color and continue to grow well. Winter rye for green manure is blooming.

Colby, continued:

Corn for the breeding work with Colby Bloody Butcher was planted on the 27th, today. This morning, May 27th, the remainder of the 1921 pig crop was marketed in the form of fat hogs.

Weather conditions for the past week have averaged cool and cloudy.

DALHART:

A severe sandstorm occurred at 5.00 p.m. on Sunday May 21, lasting well into the night. Monday was also quite windy. The remainder of the week has been very favorable to crop growth. The days have been warm with very little wind as a whole and the evenings cool. For the past three days conditions have been rather uncertain in that rain has threatened at various times. One time all plats were prepared for planting of cowpeas on the rotations, ready for planting the following day. During the late evening the sky clouded over suddenly and was quite threatening for a couple of hours. The sky then cleared and the next day was good, the cowpeas were planted without delay.

During the week the plats were prepared and planting made of all kafir on the M.C. plats and rotations, also of all cowpeas on the rotations. The Sudan on rotations 83, 84, and 87 was planted together with the sorgo on rotation 58, the same day as the cowpeas. The several varieties of peanuts were planted on the 25th, also the peanuts on rotation 2933. With this planting finished all that remains to complete the rotations is the planting of milo. This will be planted, if possible, the first week in June. The varieties and 3rd date will be planted on June 1, if possible. The first date was cultivated during the week. The 2nd date of planting emerged on the 25th.

Climatic data: Maximum temperature 90, minimum 45; precipitation 0.

DICKINSON:

The weather has been similar to that of late May during the past three years - high winds, practically no rain, and warm days. Little injury was done to crops by the wind but the soil was dried rapidly. However, there is enough moisture stored to last most crops for two or three weeks.

Winter rye is beginning to head and looks more promising than the crop has for several years. Corn planted on the 10th is up. Forage crops in general are looking excellent where stands have survived. Sweet clover seeded last year with various nurse crops was killed out almost completely during late summer and only about a 25 per cent stand remained where no nurse crop was used. This block was seeded to alfalfa during the week.

Some reports have been received of damage by cutworms. On the station there has been practically no damage to date.

The State Board of Administration has finally approved the installation of a light plant, the drilling of a well and increasing the water storage capacity. A Wind Electric outfit has been decided on. This equipment will supply lights for all buildings, run motors of 1½ HP capacity, and has a pumping attachment which pumps direct and will probably supply enough water for station use.

Director P. F. Trowbridge visited the station May 22.

Maximum temperature 80, minimum 38; precipitation .18 inch: precipitation in May to date 1.73 inches.

GARDEN CITY:

Weather conditions during the past week have been very favorable to the growing crops. Winter wheat and alfalfa are making a rapid growth. Winter wheat on fallow is fully headed, while that on continuously cropped land is somewhat later.

Garden City, continued:

All varieties of sorghums, except feterita, planted on May 16 have emerged to good stands. Feterita has emerged to a fair stand only. Striped ground squirrels are very numerous this year and are doing some damage in spite of efforts to control them.

Corn and cowpea land was prepared for planting and all plats were planted on the 25th. Corn and sorghum varieties on the State project were planted on the 26th and 27th. Milo and kafir in the rotations will be planted next week.

Plats to be late spring-plowed were plowed during the week. Other field work consisted of cultivating roadways and hoeing weeds from fence and tree rows.

Maximum temperature 80, minimum 47; precipitation .35 inch; evaporation 1.606 inches; average hourly wind velocity 8.9 miles.

HAVRE:

Weather conditions during the past week have been extremely variable. The minimum temperature of 35 was recorded on the night of the 21st. While there was no frost at the station, in neighboring localities tender garden vegetables were injured. The 24th and 25th were both unseasonably warm with a maximum temperature of 94. Wind velocity has been above normal all week.

Native grass is growing rapidly. Needle grass or stipa is starting to head and the June grass is nearly headed. Gramma grass is just starting growth. Some of the early numbers of Cristatum in the grass nursery have started to head. Leaves on the cottonwood and box elder trees are now nearly full size.

Plowing for corn was completed during the week, but no seeding was done on the rotations. Flax and corn will be planted as soon as possible next week. Weeds have made a start on all the fall plowing. From appearances at this time, damage from the Pale Western cut worm will not be very serious this season. The worm is at present on the station, but so far has caused very little damage to the grain crops. The worms are much smaller than they were at this time last year, and the grain crops are growing so fact that the plants will soon be too large for cut worm injury.

HAYS:

The first three days of the week were cloudy and rainy. Total precipitation for the week, 1.47 inches. This came in good time to check the little drought which had just begun to check development of the small grains. The last part of the week has been sunny, warm, and generally quiet. All crops have responded to the favorable conditions with good growth and development.

Winter wheat, barley, and oats are heading nicely. The first heads of winter wheat and barley fully emerged were observed May 22. Oat heads began to show two days later. The most advanced of the winter wheat is about 30 per cent headed. Spring wheat has not yet commenced heading. Winter wheat ranges in height from 9 to 36 inches, the latter being on fallow ground. There are several plats of wheat on fallow ground which are thick and very even at a height of 36 inches. These are very attractive to visitors. The spring grains are from 15 to 20 inches high and generally even and thick enough to make a good crop.

Winter rye on the green manure plats had reached an average height of 48 inches; was about all headed and the earliest heads in bloom when plowed under today (27th.) Peas sown for green manure are now 15 inches high and looking very good.

Most of the work during the week consisted in repair and clean-up jobs, and after the ground had dried sufficiently weed destruction by cultivation, and plowing of certain fallow plats. Thinning of corn plats was finished today.

HUNTLEY:

Spring sown grains have benefited by the unusually warm weather of the past few days. Besides making a good growth they have taken on a darker and more healthy color. Flax sown a week ago has emerged with a good stand. Winter wheat has made very little growth during the week aside from tillering rather profusely. Winter rye, on the other hand, has not only spread out but had sent up a large number of stalks until the plats are about 10 inches high, whereas the winter wheat averages but four to six inches high.

The preparation of the ground for corn was completed yesterday, but the planting had to be postponed because of a soaking rain which fell yesterday afternoon and last evening.

Planting the dry-land garden, potato varieties, bean varieties, and some of the wheat varieties was done during the week.

Hogs were placed on the Dry-land pastures on the 24th. The acre of rye pasture has a good stand of forage but the brome grass and alfalfa plats are poor.

Soil samples taken during the week show the moisture penetration in fallow and corn ground to have reached a depth of 30 inches, while land cropped to small grains last year is wet to a depth of 24 inches. The precipitation since April 1 has totaled 5.53 inches which is 65 per cent above the average for the period.

Maximum temperature 94, minimum 40; precipitation .83 inch.

JUDITH BASIN:

Exceptionally high winds prevailed throughout the week and for several days, the temperatures were unusually high for this time of the year. Strong hot winds during this period caused the soil to dry out very rapidly and the evaporation was greatly in excess of normal, the maximum daily evaporation being .392 inch. The latter part of the week was very cool, however, and over one-half inch of rain was received. The hot drying weather was thus terminated before any damage was done to crops and was of considerable benefit as it greatly hastened the growth of all crops.

Field work has been devoted to the trimming of all plats and to the planting of a 10 acre field of corn and the remaining sunflower and corn experiments. A large number of tree plantings were also made about the buildings. With the exception of a 10 acre field of alfalfa, all seeding at this station has been completed.

Maximum temperature 89, minimum 35; precipitation .53 inch.

LAWTON:

Rainfall to the amount of 1.52 inches which fell on the night of the 21st delayed field operations until the morning of the 24th. Since that time discing, harrowing, and planting have progressed very steadily. Many of the listed plats and some of the surface plats which had been planted to kafir and cotton were badly washed by the torrential rain on the 21st. It was necessary to level a few of the plats up with the grader.

Cotton was planted on the 18th, and is showing a very good stand where washing did not occur. Kafir is coming up rather unevenly. It is likely that most listed kafir plats will have to be replanted. Planting of all experimental plats in Fields A and B was completed today.

Messrs. Ballard, and King of the Greenville, Texas Station, arrived on the 21st to attend to the cooperative cotton planting which was completed on the 25th.

Corn has made excellent growth and oats indicates a very good yield. Wheat is heading but is badly rusted. Its growth appears more like grass than

Lawton, continued:

a grain crop.
Maximum temperature 92, minimum 59; precipitation to date 6.32 inches.

MANDAN:

Agronomy.

The past week has been warm and dry, with high winds on two days. The average maximum temperature for the week was 77 degrees as compared with 72 degrees which is the average for the past eight years for the same period. The average minimum temperature was 52 degrees as compared with the eight-year average of 44 degrees. The average of 52 is the highest average for the same period since the station was started.
Maximum temperature 81, on three days; minimum 60; precipitation 0.07.

While small grains have made fair progress for the week, they are in need of rain. Winter rye, which is just coming into head, is beginning to dry up. Brome grass and wheat grass also show the shortage of moisture.
Corn is up to a good stand on all plats. Gophers have done some damage to corn and a few cut worms have been noted. Cut worms have been reported to be doing considerable damage in the county.
Plowing has been continued for cane in the feed field. The soil has dried out so that the furrow slice turns up practically dry.
Alleys and roads were cultivated and the plats trimmed. The disc cultivator has been used for the past four years to trim the plats.
Forage crops have made fair progress during the week, but have been somewhat retarded because of moisture shortage.
Soil samples were taken on the corn and wheat plats. Spring plowing shows more moisture than fall-plowing, while land that was fallow last year contains more moisture than it has for the past two or three years.
The alfalfa and sweet clover varieties which were seeded on May 1 for the Office of Forage Crop Investigations, are now so weedy that it is doubtful if they will survive.
The small grain plats on land that was fallow in 1921, are perhaps more weedy than during any other year since the station started. The pepper grass (Lepidium) seems to be the worst weed on these plats. It seems to be worse this year than usual. It is not as bad on the disced corn plats. This may be because the corn plats were double-disced while the fallow plats were double-harrowed.

Cooperative Grazing Experiment.

Native vegetation made some growth during the week, but it was not as marked as during the preceding week.
The steers were started on their pastures the first of the week. The average weight of the steers was 680 pounds per head. This weight is less than the average of the steers used in former years. However, many of the steers are much thinner than those used before. With the condition of the grass and the cattle maximum gains should be obtained during the next 30 days.

Arboriculture.

Cultivation of fields and experimental tree blocks has continued, and hoeing of weeds in two year seedling fields has been gone over once.
The irrigation plant for the nursery stock was placed in operation the 25th. The motor driven pump lifts a four inch stream from the Heart River, 127 feet in altitude. The water is conducted from the outlet by canvas hose 9 inches in diameter, and lengths of 25 feet each. The lawns within the radius of the hose were flooded as a tryout. Irrigation of the conifer seedling transplant fields is in progress, and the entire fields will be finished for the first time today.

Mandan, continued:

today.

Horticulture.

Tomato plats have been set out in the acre-garden and in the selection field. About 100 tomato selections are being tested this year. Rain is now needed to give the newly set plants a good start. About 400 tomato plants have been sent to other stations.

The flower beds on the grounds, consisting mostly of geraniums and cannas, have been planted. Persian lilacs and Flowering currants on the grounds are blooming very profusely this year.

It now appears that there will be a heavy set of most fruits. Profuse blooming has been the rule in the case of almost all fruits of a bearing age.

Other work during the week included harrowing the potato field, pruning and tieing up grapes, watering seed beds, and cutting back bud stocks. The stand obtained from last year's budding will be about 50 per cent.

NORTH PLATTE:

The past week has been the best for growth of crops so far this spring. A rain of 1.06 inches fell on Sunday. Since that time the atmosphere has been humid, temperatures high, and wind movement slight. All grain crops have made a rapid growth. Corn is practically all up with good stands. Alfalfa will be ready for first cutting in about ten days.

SHERIDAN:

The weather has been quite cool for the most of the time during the past two weeks, with the exception of two hot days during the last week. There also has been considerable wind, much more than is usual here at this thime of the year.

Due to the cool weather, growth of all vegetation has been slow until the last few days. Winter grain in general is in poor condition, the stand of most of it being thin and irregular, and growth slow. All spring grain is looking very good, and that seeded early seems fully as far advanced as the winter grains, except winter rye. Alfalfa has made rapid growth in the rows during the past few days, and at present promises a good crop. That seeded solid, however, has not made near as rapid a growth, and much of the older seedings have killed out.

Flax and corn were seeded the week of the 20th. The flax emerged about the middle of the past week, with a much better and more even stand than in the past two years. The corn has emerged during the last two days with a good stand.

The later forage crop varieties and the potatoes were planted during the week. There remains now only cane and Sudan grass for feed yet to seed. Cowpeas and soybeans seeded the 18th and 19th are showing up today.

The roadways have been lined up and a part of the alleys cultivated. The grain in general, except winter wheat has a good start ahead of the weeds, but many of the alleys are becoming weedy already.

Maximum temperature 91, minimum 42; precipitation .42 inch.

TUCUMCARI:

The asembling of the windmill secured from Dalhart was completed early in the week, and the mill is giving good service.

About four acres of rowed sumac and twelve acres of broadcast sumac were put in this week, after spring-toothing the ground. All of the north field, rotation plats, with the exception of cotton ground, was spring-toothed and planted. The surface soil is so dry that it was thought unwise to plant cotton until rain is secured. Twelve acres of the north field, increase crops, remain unplanted; this will be planted this coming week if weather conditions are favorable.

Tucumcari, continued:

Good stands were secured on practically all of the variety plats, grain and forage sorghums; rotation plats in the center field; cowpea and Sudan plats; and M.C. plats with the exception of the listed plats F and G. The F and G plats were so lumpy that only a partial stand has emerged and many seeds will not germinate until rain falls.

The orchard was disced lengthwise and spring-toothed cornerwise and hoeing was done near the trees. Cherry trees are well loaded, while a few of the crab-apple trees carry a fair amount of fruit; hail destroyed practically all of the peaches, while the apple and plum trees had a very few blossoms this spring.

Although exactly the normal precipitation for the year to date, 5.59 inches, has been received, the ground is very dry. During the last four months of 1921 only .96 inch precipitation was recorded, so the soil contained very little moisture this spring.

Maximum temperature 93, minimum 50; evaporation 2.296 inches; precipitation .01 inch; precipitation for month to date 1.32 inches; wind velocity 4.2 miles.

WOODWARD:

On the evening of the 21st, just before dark, we had a very severe wind storm, accompanied by rain and a little hail. The wind was said to have done considerable damage in some localities. On the station it broke limbs on a few trees and broke off some of the new growth or grape vines. There was enough rain to keep us out of the fields for most of the next day. Most of the week has been very warm with excellent growing conditions.

Kafir and sumac, which were planted on the 12th, are showing up very nicely at present. Peanuts are also making good growth. Most of the varieties of grapes are either in bloom or through blooming. Most of the work during the week has been preparing the ground for planting, and planting kafir and sumac on the dairy farm. The Cereal Project kafir nursery has been planted.

Maximum temperature 94, minimum 53; precipitation .48 inch; evaporation 2.268 inches.